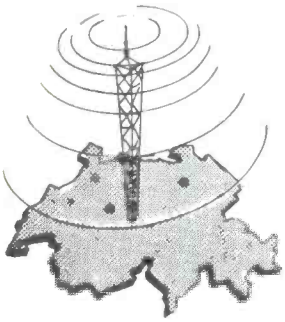
the mighty midget

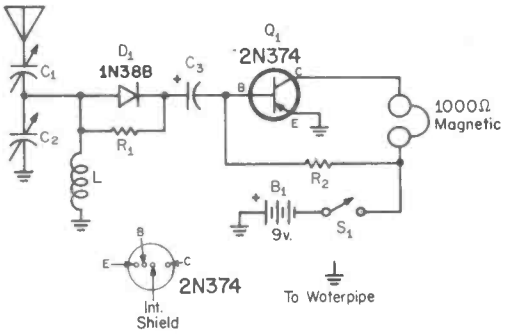


by HANK MILTENBERG, KDH2299

Florida readers will recognize the author as being the owner/operator of the three Parts Unlimited electronics stores in Jacksonville, CB headquarters for northern Florida. Hank just opened up a new CB emporium at 1237 East Colonial Drive, Orlando.

A 1 TRANSISTOR SHORTWAVE RECEIVER

This little receiver won't break any world-wide DX records, but it will permit you to get a look as what's going on around the megacycles for about a $3 or $4 investment (or less if you have a well stocked junk box). It should drag in shortwave station within a radius of several hundred miles, and do it surprisingly well. I was able to obtain coverage from 2.5 through 8 megacycles on it, and that includes several ham and international broadcast bands, plus marine and aviation bands. I constructed the receiver using a small metal box as the chassis.



PARTS LIST

C_1 150 uuf variable
C_2 100 uuf variable
C_3 10 uf, 12 v. electrolytic
R_1 220 K resistor
R_2 220 K resistor (see text)
L see text
B 9 volts
Q_1 2N374 transistor
D_1 1N38B diode
S_1 SPST toggle
Pair of 1K ohm magnetic earphones, chassis box, coil forms, knobs for $C_{1,2}$

COILS

Different coils provided full frequency coverage, these were wound on 1¼" diameter coil forms. I used number 28 enamelled wire with the following number of turns for the different bands covered:

28 turns = 3 to 4 mc/s
14 turns = 4 to 8 mc/s

OPERATION

Capacitor C_1 allows you to peak the antenna, while C_2 changes the stations. The antenna should be an outside long wire, and make it as long as possible. The circuit should be grounded, as indicated on the schematic, to something like a cold water pipe. I suggest that you experiment with different values of R_2 to obtain best operation of the circuit, try values from 100K to 1 Meg—or install a 1 Meg. pot in the circuit here.

Be certain that you carefully observe proper battery polarity.

You can experiment with different coils for additional frequency coverage, more turns give lower frequency coverage, less turns give high frequency coverage.

When experience counts, it's S9 every time!

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